

SYMPOSIUM ON EFFECT OF WATER ON BITUMINOUS  
PAVING MIXTURES

## INTRODUCTION

BY C. E. PROUDLEY<sup>1</sup>

Bituminous pavement failures caused by stripping of asphalt from the aggregate have been observed to be more prevalent among some combinations of materials than others. The basic cause of the difference in behavior among materials is not known but is the basis for several hypotheses as discussed by Mr. J. M. Rice in the second paper of this symposium. The asphaltic materials are not held blameless, and the theories involve seldom-studied properties of the asphalt component of an incompatible mixture, especially as they may cause reactions with the aggregate in the presence of water.

This symposium, sponsored by ASTM Committee D-4 on Road and Paving Materials, directs attention to the problems of stripping that have engaged the thinking of groups of investigators for many years, as indicated in the bibliographies covering the past 28 years accompanying the papers by J. M. Rice and Wm. H. Goetz. A subcommittee of Committee D-4 has been actively pursuing the subject for over 20 years, one of its primary purposes being the development of a reliable standard test for the measurement of stripping.

The various field and laboratory pro-

cedures that have been tried with varying degrees of success are described by Mr. Wm. H. Goetz in the sixth paper of the symposium, and a more recent development is reported in the paper by A. B. Brown, J. W. Sparks, and G. E. Marsh entitled "Objective Appraisal of Stripping of Asphalt from Aggregate" which was presented at the Fifteenth Session of the 1958 Annual Meeting, sponsored also by Committee D-4, and is included in this publication.

The use of antistripping additives in the asphalt has shown some benefit, and this has resulted in the marketing of a considerable number of compounds for which some of the more or less extravagant claims may be justified. Mr. Paul F. Critz in the fourth paper reports the laboratory comparisons of several types of additives, including those defined as heat-stable.

Laboratory and field studies of test roads over a period of twelve years reported by Messrs E. W. Klinger and J. C. Roediger demonstrate the need for further correlation between field observations of the performance of additives and laboratory testing.

The necessity for a review of the status of knowledge pertaining to stripping is undeniable, but the scope of the effect of water on bituminous paving mixtures

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is sometimes not realized. Mr. Ward K. Parr's summary of information and comments from throughout North America, in the introductory paper for the

symposium, emphasizes the importance of a solution to the problem for the greater success of all types of bituminous construction.